

FULLY INVOLVED

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**Battalion Chief
Rick Howard**

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Don't Worry, Be Happy!

Well, as you all have heard, Osama Bin Laden is having a chat with Allah right about now. Unless you live under a rock, you probably have seen all of the hoopla that has been going on because of it. Times Square was as full of people as it is on New Year's Eve; the only thing missing was Dick Clark and the big descending apple. As I reflect on this event, I wonder about Seal Team Six. They knew exactly what they were being dispatched to. They knew how dangerous it was going to be. They knew that they needed to have proof that what they claimed to have done, actually happened. President Obama and his security team were watching, in real time, what was going on because the team members had helmet cams. After the assignment was completed, I also wonder what their demeanor was like. If they were jumping around and performing "high fives," I would hope they turned off their helmet cams. We wouldn't want that to get out, now would we? On the flip side, they just eradicated public enemy number one. To a large amount of people he was a very important leader. He provided "profound" guidance and information to plenty of people who believed that what he was doing was correct. I would never put our profession in the same arena or universe of a Special Forces member, or any military member for that matter. My hat is off to our military professionals.

In the first century, a philosopher named Epictetus said, "men are disturbed not by events which happen, but rather by the opinion they have of these events." Another translation of this says, "men are disturbed, not by things, but by the principles and notions which they form concerning things." What this means is that it isn't what happens to you that upsets you; it's the way you look at it. For example, if you are standing in a line to buy theater tickets and someone runs into you from behind you are apt to feel angry or annoyed as you turn around to see who hit you. Let's say that when you turn around you discover that the person who pushed you is blind and is carrying a white cane. What happens to your anger? Your anger goes away! The difference is that you are now thinking differently about the situation than before you turned around. When you were angry you were probably thinking something like, "What in the world is wrong with him? He ought to look where he's going!" Now you are thinking, "Oh, poor fellow! He's blind and couldn't help it!" Another way of putting this is to say that our feelings are based on our own thought processes and attitudes rather than merely on the events around us. This explains why some people can handle difficult situations pretty well. They have a philosophy, a set of beliefs, or a way of thinking about the events of their lives which keeps them courageous and determined instead of nervous, angry, ashamed, or depressed.

Should we be ashamed of our joyous feelings about a very terrible person being “taken out?” Something really bad happen ten years ago. It didn’t happen to us personally, but vicariously. Our brothers were doing exactly what we would have done. There was no thought that this event had nefarious overtones, but it did. 343 firefighters were immortalized for eternity because of this evil deed. To have feelings of joyfulness and glee is perfectly normal. Be careful! Beware of becoming irresponsible. This does not mean for you to adopt the attitude that you don't care about your behavior - merely that you don't unnecessarily upset yourself over the inevitable mistakes all fallible human beings make from time to time. Being relatively free of shame will actually help you to make constructive changes in your life so that you will be less likely to continue making the same mistakes!

No doubt Osama is swimming with the fishes. The decision to bury him at sea was a good one. Islam demands burial within 24 hours of death. Putting him in the ground would have turned into a terrorist mecca. “Disposal, Osama Bin Laden’s funeral conducted in accordance with Islamic teachings,” said national security advisor and counterterrorism to Obama, John Brennan. The decision to bury Osama in the middle of the ocean has been planned from the beginning. “We make sure; once again, these are strictly tailored to the demands of Islam.” Another official said about the burial “his body was washed and wrapped in white cloth, placed on a board and digelincirkan (Arabic) into the sea.” Are you normal about rejoicing that this awful chapter has come to an end? Don’t worry, be happy.



Captain Kim Beck

Recharge Your Batteries

The other day it was finally time to replace the battery on my old Milwaukee drill. I love this drill and have had it for over ten years now. So I made a trip to our local home improvement store and found that not only is the battery not available, but the ones that were, are extremely expensive. I ended up buying a new drill with two new batteries. Now don’t get me wrong I love to buy tools, but I started to think how dependent - personally and as a fire department- we are, on rechargeable batteries. Everything has batteries; from our cell phones, radios, and smoke detectors, to our watches, AED’s and on and on. There are many types of batteries used in the fire service; the Nickle Medal Hydride(NiMH) in our auto pulse, to the Nickle Cadium (NiCaD’s) in our radios, and the Sealed Lead/acid (SLA) that’s in our Zoll’s. Supposedly the hottest thing on the market, and what I ended up with on my new drill, is the Lithium Ion (Li-Ion).

New Batteries

A new rechargeable battery comes in a discharged condition and must be charged before use (refer to the manual for specific charging instructions). Upon initial use (or after a prolonged storage period) the battery may require three to four charge/discharge cycles before achieving maximum capacity. It is normal for a battery to become warm to the touch during charging and discharging.

Battery Handling

If the battery will not be in use for a month or longer, it is recommended that it be removed from the charger and stored in a cool, dry, clean place. A charged battery will eventually lose its charge if unused.

It may therefore be necessary to recharge the battery after a storage period. Actual battery run-time depends upon the power demands made by the equipment it powers. The total run-time of the battery is also heavily dependent upon the design of the equipment.

Battery Technologies

Rechargeable batteries in portable lighting devices and our radios are principally made using Nickel Cadmium (NiCad), Nickel Metal Hydride (NiMH) or Lithium Ion. (Li-Ion). Rechargeable flashlight batteries are generally Nickel Cadmium, or Sealed Lead Acid that we have in our box lights. Each type of rechargeable battery type has unique properties:

NiCad and NiMH

The main difference between the two is the fact that NiMH batteries (the newer of the two technologies) offer higher energy densities than NiCads. NiMH delivers approximately twice the capacity of its NiCad counterpart. What this translates into is increased run-time from the battery with no additional bulk to weigh down the device. NiMH also offers another major advantage: NiCad batteries tend to suffer from what is called the "memory effect". NiMH batteries are less prone to develop this affliction and thus require less maintenance and care. NiMH batteries are also more environmentally friendly than their NiCad counterparts since they do not contain heavy metals.

Li-Ion

Lithium Ion (Li-Ion) has quickly become the emerging standard for portable power. Li-Ion batteries produce the same energy as NiMH batteries but weigh approximately 35% less. This is crucial in applications such as portable two-way radios or notebook computers where the battery makes up a significant portion of the device's weight. Another reason Li-Ion batteries have become so popular is that they do not suffer from the memory effect. They are also environmentally friendly because they don't contain toxic materials such as Cadmium or Mercury.

Sealed Lead Acid(SLA)

We use sealed lead acid batteries in our Zoll machines, box lights, and we will also see these as the battery backup in alarm panels and emergency lighting. These batteries come in six, twelve, and twenty four volts. Sealed Lead Acid batteries are the oldest type of rechargeable batteries and are also found in cars and fire apparatus.

Memory Effect

NiCad batteries, and to a lesser extent NiMH batteries, are prone to what is referred to as the "memory effect". What this means is that if a battery is repeatedly only partially discharged before recharging, the battery "forgets" that it has the capacity to further discharge all the way down. To illustrate: If you, on a regular basis, fully charge your battery and then use only 50% of its capacity before the next recharge, eventually the battery will become unaware of its extra 50% capacity which has remained unused. The battery will remain functional, but only at 50% of its original capacity. The way to avoid the "memory effect" is to fully cycle (fully charge and then fully discharge) the battery at least once every two to three months. Simply leaving the device in the ON position and letting it run can discharge batteries completely. This will help insure your battery remains healthy. Once discharged, recharge the battery completely according to the manufacturer's instructions.

Battery Upgrade

NiCad, NiMH and Li-Ion are all fundamentally different from one another and should not be substituted unless the device has been pre-configured from the factory to accept more than one type of rechargeable battery technology.

The difference between them stems from the fact that each type requires a different charging pattern to be properly recharged. Therefore, the device's internal charger must be properly configured to handle a given type of rechargeable battery. Refer to the owners manual to find out which rechargeable battery types the particular device supports.

Maintaining the Batteries

Keep the Batteries Clean

It's a good idea to clean dirty battery contacts with a cotton swab and alcohol. This helps maintain a good connection between the battery and the device.

Exercise the Battery

Do not leave the battery dormant for long periods of time. We recommend using the battery at least once every two to three weeks. If a battery has not been used for a long period of time, perform the new battery break in procedure described above.

Battery Storage

If you don't plan on using the battery for a month or more, we recommend storing it in a clean, dry, cool place away from heat and metal objects. NiCad, NiMH and Li-Ion batteries will self-discharge during storage; remember to break them in before use.

Battery Ratings

There are two ratings on every battery: volts and amp-hours (AH). The AH rating may also be given as milliamp-hours (mAh), which are one-thousandth of an amp-hour (for example, 1AH is 1000mAh). The voltage of the new battery should always match the voltage of your original.

Battery Lifetime

The life of a rechargeable battery operating under normal conditions is generally between 500 to 800 charge-discharge cycles. This translates into about three years of battery life for the average user. As the rechargeable battery begins to die, the user will notice a decline in the running time of the battery. When a battery that originally operated the radio for a whole shift is only supplying the user with an hour's worth of use, it's time for a new one.

Rechargeable vs. Non-Rechargeable

NiCad batteries are rechargeable, whereas Lithium and alkaline batteries are not rechargeable. Therefore, Lithium and alkaline batteries must be replaced by equivalent batteries of the same type. Attempting to replace these non-rechargeable batteries with a NiCad will result in a nonfunctional battery because the device lacks the proper charging circuitry to charge the NiCad battery.

Conclusion

As firefighters, we rely on batteries for our radios, medical equipment, and flashlights. Choosing the right battery and keeping that battery maintained should be part of our daily maintenance routine. Having a dead radio battery on a scene of a fire, could end in dire consequences.

Stay safe.



Firefighter Shad Hatfield

Flood Potential

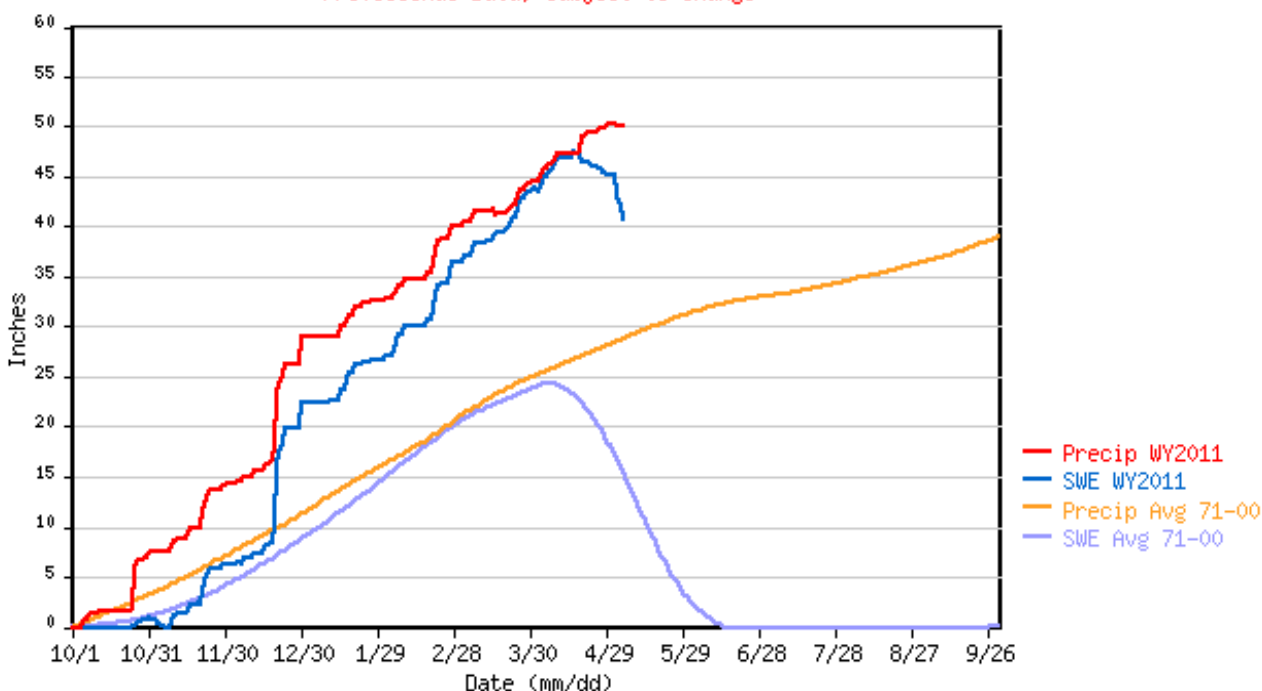
Winter by the calendar is officially over and under normal conditions snowpacks begin to melt. Looking out the window, winter seems to be hanging on and snowpacks at the mid and high elevations are still accumulating. The month of April plays a strong role in determining the melt of the snowpack; if it remains cold (which it did) the snowpack in the lower elevations does not melt off as hoped for. During April Mother Nature has kept cooler temps and has continued to dump more snow in the mountains. Here lies the problem. Temperatures in May and June can rise rapidly, melting the snowpack at all levels of elevations, this in and of itself can cause major flooding. Add that to an intense rain storm and you have a recipe for disaster.

As of April 1st the snowpack in our region comes in at 139% of normal which is near record amounts. The soil moisture saturation level is at 60%, which is higher than normal. With a high saturation level such as this, the runoff does not soak into the ground as well and you tend to see higher runoff amounts. Why is this important? The water must go somewhere! Stream flows are forecast to be well above average this year. Most flows are forecast to range from 130% to 180% of normal. Once the water makes its way through the streams and rivers it accumulates in a reservoir or a lake. The Provo Basin reservoirs right now are at 91% of capacity with Utah Lake coming in at 102% of capacity.

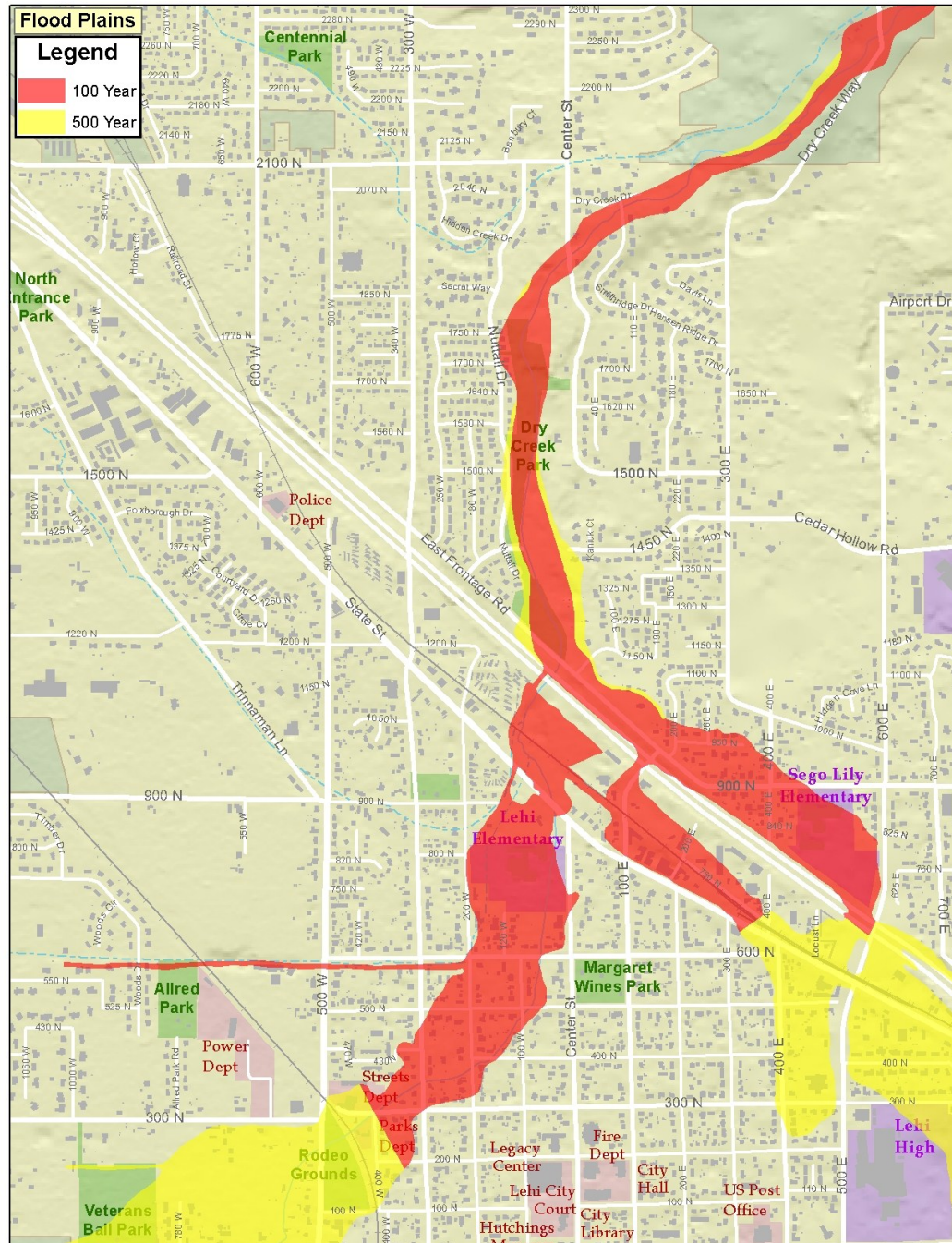
We all know that there is great concern for flooding this year. It is evident because we have seen its wrath already in parts of Utah. As the temperature begins to rise and the snowpack begins to melt the chance of flooding will greatly increase.

TIMPANOGOS DIVIDE SNOTEL for Water Year 2011

*** Provisional Data, Subject to Change ***



When severe flooding occurs it's a cooperative effort involving many city departments, elected officials, volunteers, etc. to help control the flood. Right now there is more water in the mountains waiting to come down than there was when the floods of 1983 occurred. All signs point to probable flooding. The climate during May and June will play a big part in how severe the flooding will be if flooding does occur.





Engineer Jeff Smith

Pre-Plan: M.A.T.C. Building

The monthly preplan that I have chosen to share with you is the new M.A.T.C. building. I know the majority of the preplans have been in the Station 82 area, but don't fret I will include Station 81 businesses soon. Now to review the college, the building is located at 2301 N. Ashton Boulevard. It is a three story, type I constructed building with concrete floors and masonry exterior. The layout of the L shape building and the location of the "A" side can be confusing at a first glance. The A side of the building is located along 2300 W. Also, located on the A side is the nearest hydrant, the FDC location, PIV location, and the gas shutoff. Electrical shut off, alarm panel location, and riser room can be found on the B side. The main entrance of the school is located on the west side, which is the C side of the structure. This area is the main parking lot for the students and could cause apparatus positioning problems during school hours. The Knox Box is located at the main entrance of the C side.

Inside the structure, you will notice that two main hallways with classrooms create the L shaped structure. Entrance/Exits are located at each of the hallways. At the A/B hallway corner, you will find a room labeled Chiller Room that will lead to the riser room from the interior to access utilities mentioned earlier. After discussions with the maintenance personnel, the "chiller room" sign will be replaced with "riser room" for less confusion when responding. At the A/D corner an atrium is located with a stairwell that only leads to the second floor. In the main hallways, you will find other stairwells that lead to the second and third floor. Storage rooms labeled #209 and #227 on the second floor provide ladders to access the roof if needed. The third floor has mechanical rooms, storage rooms, and a few classrooms near the stairwell.

A CDL building is located on the C side of the property away from student parking. This building has its own utilities and Knox Box key located on the B side of the structure. The riser room can be accessed from the inside of the structure at the A/B corner behind a closed door. The gas shut off and the nearest hydrant are located on the D side of the structure.

MAY BIRTHDAYS

Ernie Curwen - May 5th

Jeff Smith - May 23rd

Ryan Kimball - May 20th

Marty Glover - May 26th

Brandon Howard - May 20th

Ricky Evans - May 27th

Russ Ferre - May 22nd

Mi Casa is NOT Su Casa

I live in the “downtown” part of Lehi. My neighborhood, like many parts of our city, is a great example of construction diversity. Some homes in my area were constructed prior to 1930, many in the seventies and eighties, and some are only a couple years old. This extensive range presents a large variation in construction materials.

Real 2x4's no longer exist, in many cases staples are being used in place of nails. Lumber is smaller, lighter and weaker than it used to be.

The house I lived in before I built was comprised of adobe walls approximately 14 inches thick. The trusses had been modified with lightweight lumber where the thicker, older stick frame lumber had started to sag from the excessive weight of the bar tile roofing. This combination creates a serious and possibly fatal collapse hazard for firefighters and is almost impossible to notice on a quick size-up.

Recently C shift did a walkthrough of some new townhomes under construction above 3200 N. We noticed several out-of-the-ordinary construction materials, including:

Floor trusses; (These are constructed with a long 2x4 bottom and top cord that run in parallel approx 18” apart, the middle is webbed with angled cut 2x4s which are connected to the cords with thin metal gussets). These are used to support more weight and span greater distances than your smaller wooden I-beams or TJI's. The floor trusses create problems such as; large void spaces with minimal firestops and they can fail at temperatures around 500 degrees.

Shaft Liner; (A new form of concrete-like wallboard used for area separation, in this case to separate the living spaces, commonly manufactured at 1” thick). The separation board will often run on balloon walls and is difficult to breach. It is constructed with a fire-resistant type X gypsum core and is in compliance with NFPA 5000 Building Construction and Safety Code.

It is not only our job, but our responsibility to get oriented and familiar with building construction, OLD or NEW. Here are some key items that stick out and help me identify potential threats:

- Old or new construction- Does there appear to be additions
- Basement or crawlspace- Windows=basements, vents=crawlspace, neither=concrete floor
- Attic or Bonus rooms- Windows or vents, dormers
- Roof- Steeper pitch often means vaulted ceilings or bonus upstairs, thickness of fascia may tell you lightweight truss or heavier stick frame
- Windows- Different size window for different size room, i.e. larger for living rooms
- Walls- Thickness of walls noticed at windows can help identify if it's adobe, or if masonry is cosmetic or structural
- Direction and location of stairwell- Helps determine load bearing points and walls, perhaps a good indication of the direction your floor joist run

These size-up tools have helped me identify structures for hazards and red flags, hopefully they can be used to benefit you as well. Recognizing the interior layout from the exterior is not always possible or easy, but attention to these and other details can relay more information than we think. Our lives just may depend on it.



Firefighter Trevor Dorton

Check out the Flickr website below to see some pictures from our latest calls and events. We will keep it updated so check back often.

<http://www.flickr.com/photos/fullyinvolvednewsletter/>



Engineer Dan Harris

Current Events

We have a new addition to the Lehi Fire Department family... Clark and Adrienne Clifford welcomed their new daughter Mae on April 15th, she was 7 lbs and 20.5 inches at birth. Adrienne and Mae are both doing well.

In addition to new family members, LFD can now welcome a new piece of apparatus to the LFD family. Battalion Chief Howard has received a new "red buggy" complete with rear slide out IC post.

We were fortunate enough to have some more great training in April. We had a second Air Management class which was successful, although as instructors we learned something from each class to make the next class better, sorry to C shift for having to be first. Thanks for all the great input from everyone. We also were able to attend some very valuable advanced airway training which I felt helped us to really improve our skills. Thanks to Orem Fire Department and all those involved in making that training happen!



Captain Ricky Evans and Crew at the Lindon Animal Shelter. Dog Lab training - April 21, 2011

CALL TOTALS

Station 81

Medical: 58
Fire: 32
Total: 90

Station 82

Medical: 36
Fire: 26
Total: 62

Featured Call

This month's call comes at the last possible moment and by way of an agency assist for Saratoga Springs Fire Department. The evening of April 30th Engine 261 and Ambulance 262 were called to a report of a 32 year old female who was 7 months pregnant that had started to experience back pain and difficulty breathing. Two minutes prior to Saratoga Springs unit's arrival it was reported that the patient was no longer breathing. E-261 and A-262 arrived and began CPR. The only medical history reported was a possible cardiac problem when she was a child. Saratoga Springs called for paramedic's from Lehi to assist. Ambulance 81 responded.



Firefighter Shad Hatfield

Upon A-81's arrival CPR was in progress and the patient was in PEA, IO access had been established, she had been intubated and confirmed ET tube placement with end tidal CO₂, and Epi 1:10,000 had been administered. The patient was moved to A-81's stretcher and she was placed on the Autopulse. The patient was then transported to American Fork Emergency Department. Enroute, we continued to administer ACLS medications and treat for "H's and T's". At one point she went into V-Fib and we were able to defibrillate her, however, upon next rhythm check she was found to be back in PEA. An 18 gauge IV was established enroute, and we maintained a secure airway with CO₂ reading around 36 mmHg throughout transport.

Upon arrival to the ED she was still in PEA and we were met at the entrance with numerous hospital staff. She was transferred over to the hospital bed, Emergency Room staff along with Labor and Delivery staff began their assessment as report was given. A quick ultrasound was performed and a fetal heart beat was noted. An ultrasound was then performed on the mother's heart and no beating was present. Another quick ultrasound of the baby's heart was done to make sure the heart beat was still there, which it was. At this point it was decided to do an emergency C-Section. Betadine was poured over her abdomen and a fast incision was made. From the second the cut took place until the time the baby was delivered was less than a minute. Definitely one of the most impressive emergency procedures I have ever witnessed.

The baby was rushed to the warmer in the adjacent room and the Labor and Delivery team went to work on her. CPR was started due to a heart rate of 40 beats per minute. She was intubated and resuscitative efforts continued.

CPR was also continued on the mother. After approximately 30-45 minutes of resuscitative efforts in the Emergency Room despite great efforts from EMT's, paramedic's and emergency room personnel she was pronounced dead.

Life Flight was called to transport the baby who now had a stable heart rate at 145 beat per minute and CPR had been discontinued. The baby survived for 2 days before passing away. My heart goes out to the family for the devastating losses.

Saratoga Springs Engine 261

Captain Steve Chaffin
Firefighter EMT Patrick Cullen
Firefighter EMT Dave Perry

Ambulance 81

Firefighter Paramedic Shad Hatfield
Firefighter Paramedic Tim W. Robinson

Ambulance 262

Firefighter EMT Blaine Coombs